8. APPROACH HILL (EL 2366)

8.1 Introduction

The Approach Hill area of interest is located 20 kilometres east of The Granites Gold Mine. Exploration activity in the area was initially undertaken to test a chain of airborne magnetic anomalies which were believed to reflect a response from folded Davidson Beds and hence might be prospective for Granites-style gold mineralisation.

During 1991, ground electromagnetic (EM) traverse data gathered in 1990 was reassessed to allow mapping of conductive lithologies under cover. Some traverses were retested. Subsequently many of these traverses were RAB drilled. Where minor outcrops were encountered they were rock chip sampled for assay. Two gold prospects resulted from this work. They are Hairdresser on Fire (subject of a separate report) and Peter's Prospect.

8.2 Work Undertaken

EM traverses were retested on lines 9 and 11 to further define conductive horizons.

The RAB drilling program commenced in the previous year was continued into the first half of 1991.

RAB drilling procedures were essentially unchanged from 1990. Conductive zones were drilled at 25m spacings, non-conductive zones at 50m. Samples were collected over 3m intervals except where hard ground conditions required open hole percussion. In these cases the first sample interval is 4m with 3m samples thereafter. All samples were split on site and dispatched for analysis for Au and As. A total of 228 RAB holes were drilled for 4015 metres on 7 traverses in 1991.

All RAB traverses were accurately located using the Global Positioning System (GPS).

8.3 Results

RAB Drilling

Traverse 4

Traverse 4 was partially drilled in 1990, and drilling is now completed. Bedrock consists of pelite schist, pelite-sericite schist and micaceous greywacke, all belonging to Madigan Beds.

A single gold anomalous (>10ppb) value of 20ppb Au was recorded in sericite pelite schist. Peak arsenic was 30ppm.

Traverse 5

Interpretation showed several good conductors due to graphitic schists. This was shown to be correct from minor outcrop of graphitic schists and same intersected downhole.

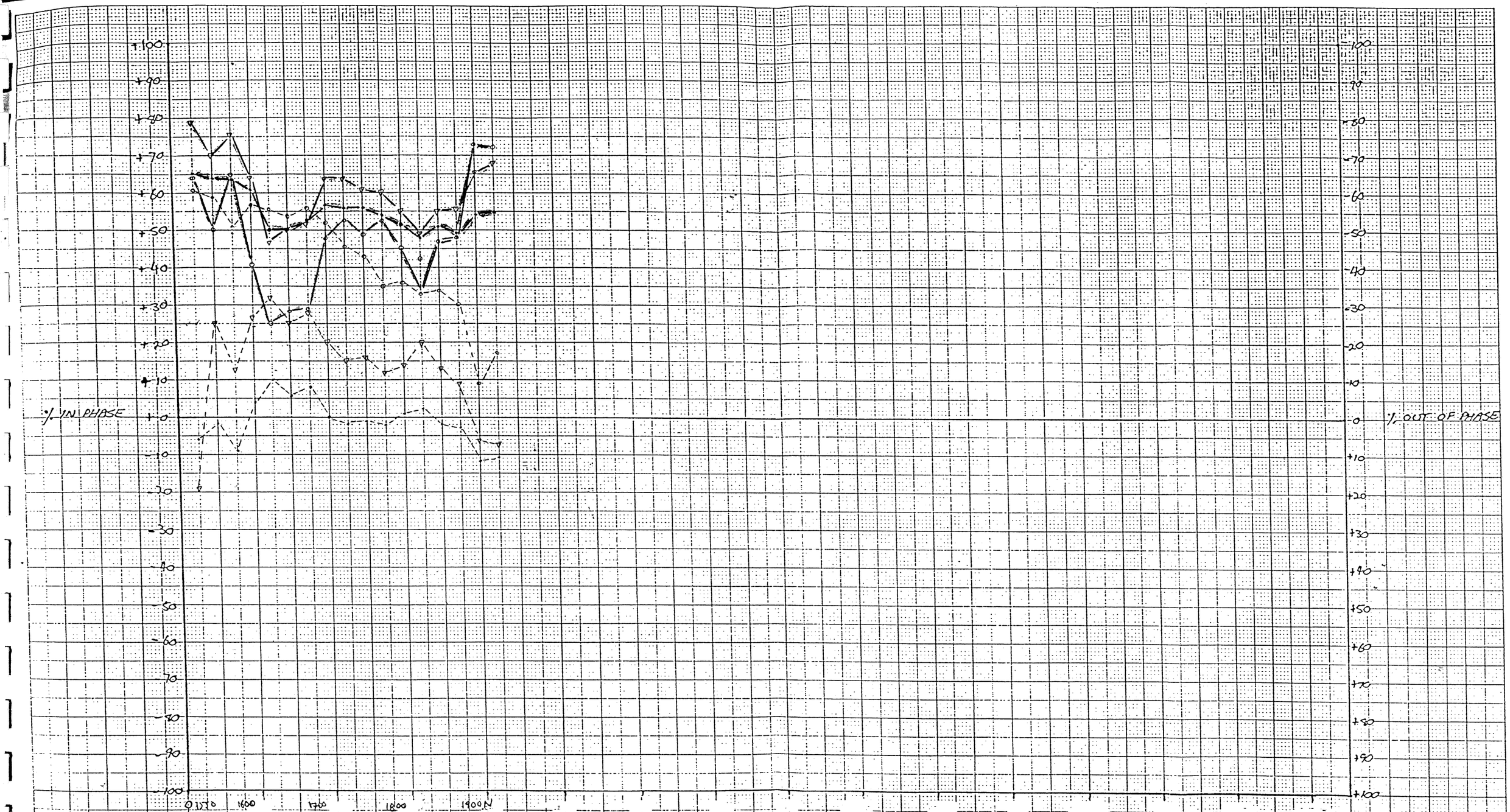
No anomalous (>10ppb Au; > 100ppm As) assay values were received.

Traverse 7

Traverse 7 lies within the same magnetic structure as that tested on Traverses 8 and 9 ("Peters Prospect").

Bedrock (Traverses 8 and 9) comprised foliated granite at the eastern margin passing into mafics occupying conductive zones. Anomalous platinum and palladium results were detected within these mafic units on traverse 9 in 1990.

Bedrock on Traverse 7 consists of biotite granite, with mafics occupying the conductive zones, and quartz greywacke and quartz-mica schists.



FREQUENCIES	IN-PHASE	OUT-OF-PHASE
3555 Hz	o—o	o - - - o
1777 Hz	▽—▽	▽ - - - ▽
888 Hz	·—·	· - - - ·

Tx - Rx SEPARATION - 100m

CONDUCTORS: 6000 — MEDIUM — POOR

SCALE: 100m

NORTH FLINDERS EXPLORATION

PROSPECT: APPLEYARD HILL

LINE : TRANSECT 17.

MAX-MIN PROFILE

3 OF 2

1990

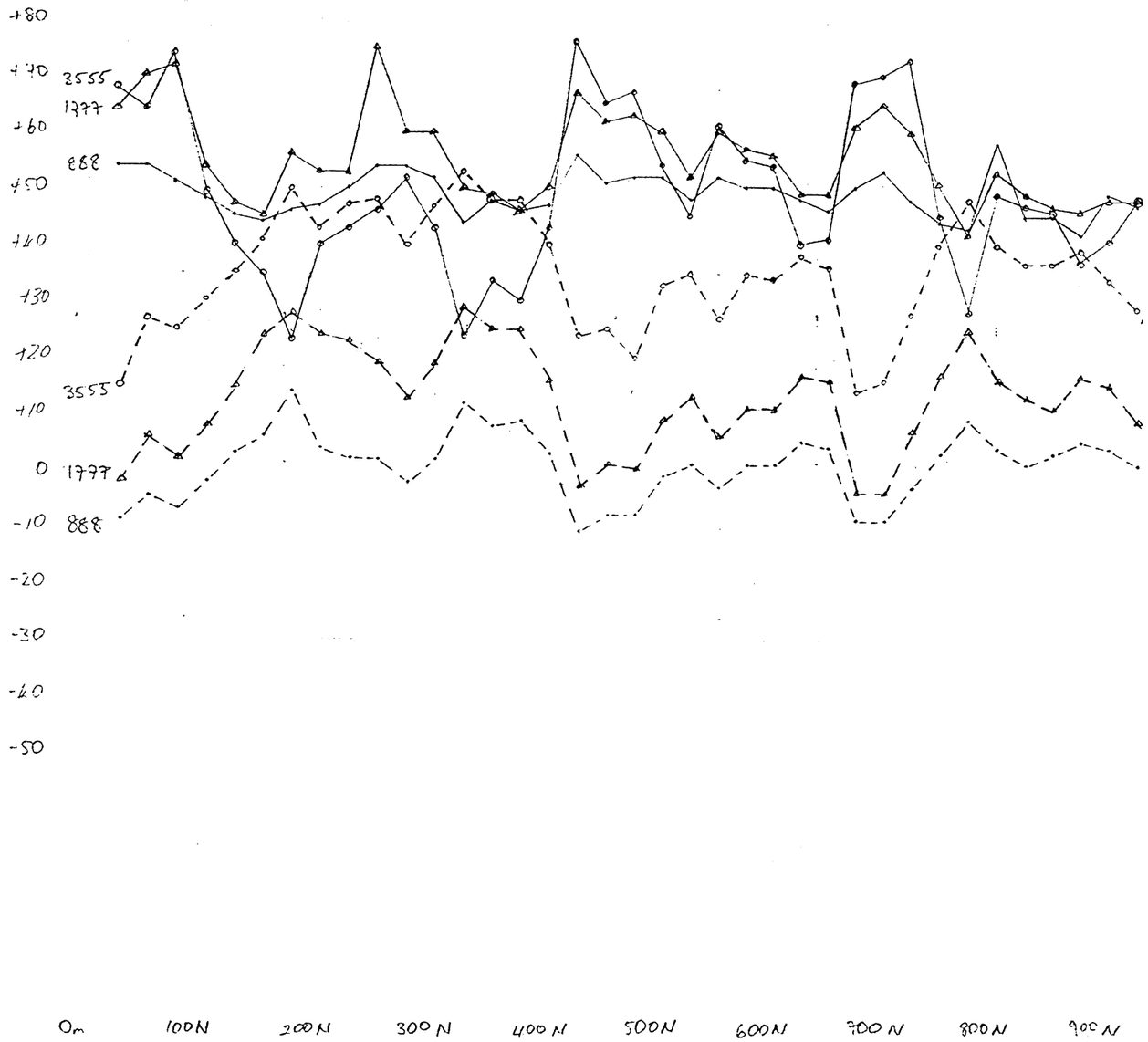
MICADOR A3 - 297 x 420 mm

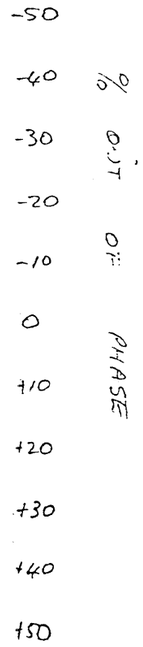
Max - Min

Approach Hill

Traverse 19

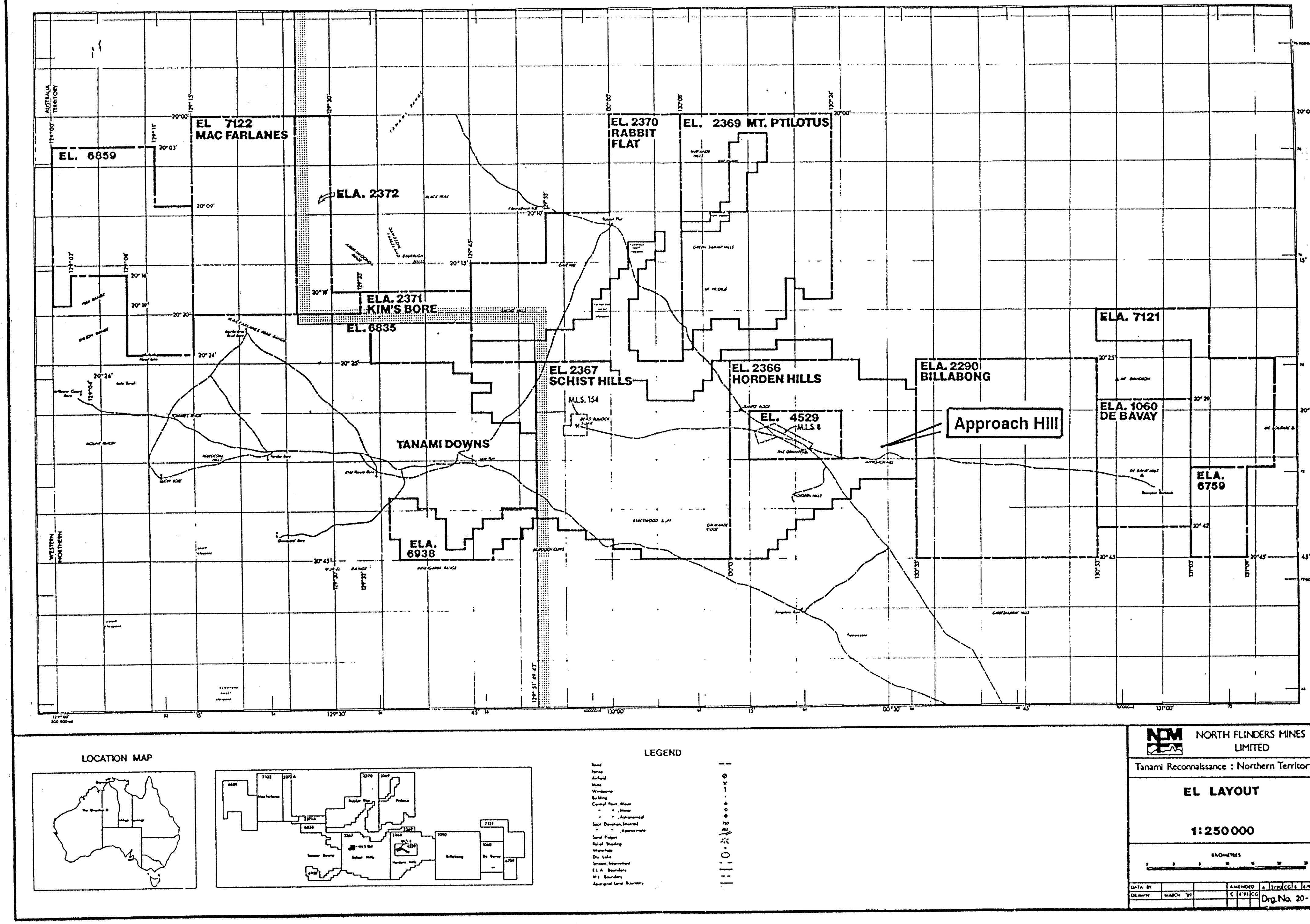
Data collected 18-9-1990





FREQUENCY	IP	O-O-P
3555		
1777		
888		

Tx - Rx = 100 m



NORTH FLINDERS MINES LIMITED

Tanami Reconnaissance : Northern Territory

EL LAYOUT

1:250 000

KILOMETRES

DATA BY		AMENDED
DRAWN	MARCH '89	Drg. No. 20-1

No anomalous (>10ppb Au; > 100ppm As) assay values were received.

Traverse 13

Drilling revealed sericite-quartz schists and chlorite-sericite schists, with indurated silts developed over granite.

No anomalous (>10ppb Au; > 100ppm As) assay values were received.

Traverse 17

EM indicated the presence of three main conductive zones on Traverse 17. As these were spread over the length of the traverse, the entire 2km was marked for RAB drilling. Hole spacing was a nominal 50 metres, closing to 25 metres over conductive zones.

RAB drilling confirmed that graphite schists and sericite schists were the sources of the EM anomalies. Stratigraphy is dominated by Madigan Beds greywackes and pelite schists. Minor ?mafic, weathered to ultra fine limonitic clay is present locally, and some fine white clays with coarse clean quartz probably represent weathered granite.

No gold anomalous (>10ppb) results were obtained. Several zones of elevated arsenic (maximum 100ppm) were encountered in a variety of rock types (pelite schist, graphite schist, ?mafic, limonitic clay).

Traverse 19

Conductors on this traverse were interpreted as graphite schists/shear zones and mafic rocks. Bedrock within the conductive zones consisted of graphite schist and mafic intrusive.

Anomalous arsenic results (>100 ppm As) were received in one drillhole within mafic intrusive. The peak assay value was 350ppm As, however the corresponding Au assay was 1ppb Au.

Traverse 20

Several conductors on this traverse were interpreted as graphite schists and/or sericitic shear zones. Bedrock consisted of quartz-sericite schist and greywacke.

No anomalous (>10ppb Au; > 100ppm AS) assay values were received.

Reassays of RAB samples within the Pt/Pd anomalous zone intersected in Traverse 8 and 9 were disappointing. Pd background was >2ppb with a maximum of 38.70ppb. Pt background was <1ppb with a maximum of 20.30ppb.

Rock Chip Sampling

Rock chip sampling was undertaken over outcrop areas immediately upslope of the anomalous zone in Traverse 9 (Peter's Prospect). In addition laterite sampling was undertaken over a mafic unit directly upslope and above the anomalous zone. This was to test for vertical dispersion from mafics at depth. This dispersion could have given rise to the flat lying anomaly.

Of the eleven (11) laterite samples taken, anomalous Zn (145ppm) with elevated Se, As and Mo, and anomalous W (16ppm) were received from separate samples.

The ridge directly upslope from the anomalous zone in Traverse 9, known locally as Peter's Prospect, was sampled. Twelve CRC samples were taken.

In addition rock chipping of a reconnaissance nature was undertaken within the area of interest. All rock chip sites were located with the aid of GPS.

Rock chip results from Peter's Prospect confirmed patchy anomalous gold and arsenic responsible for the transported anomaly on Traverse 9. Maximum assays were 20ppb Au and 60ppm As from banded cherts and ferruginous schists

Rock chip results from reconnaissance sampling were not anomalous.

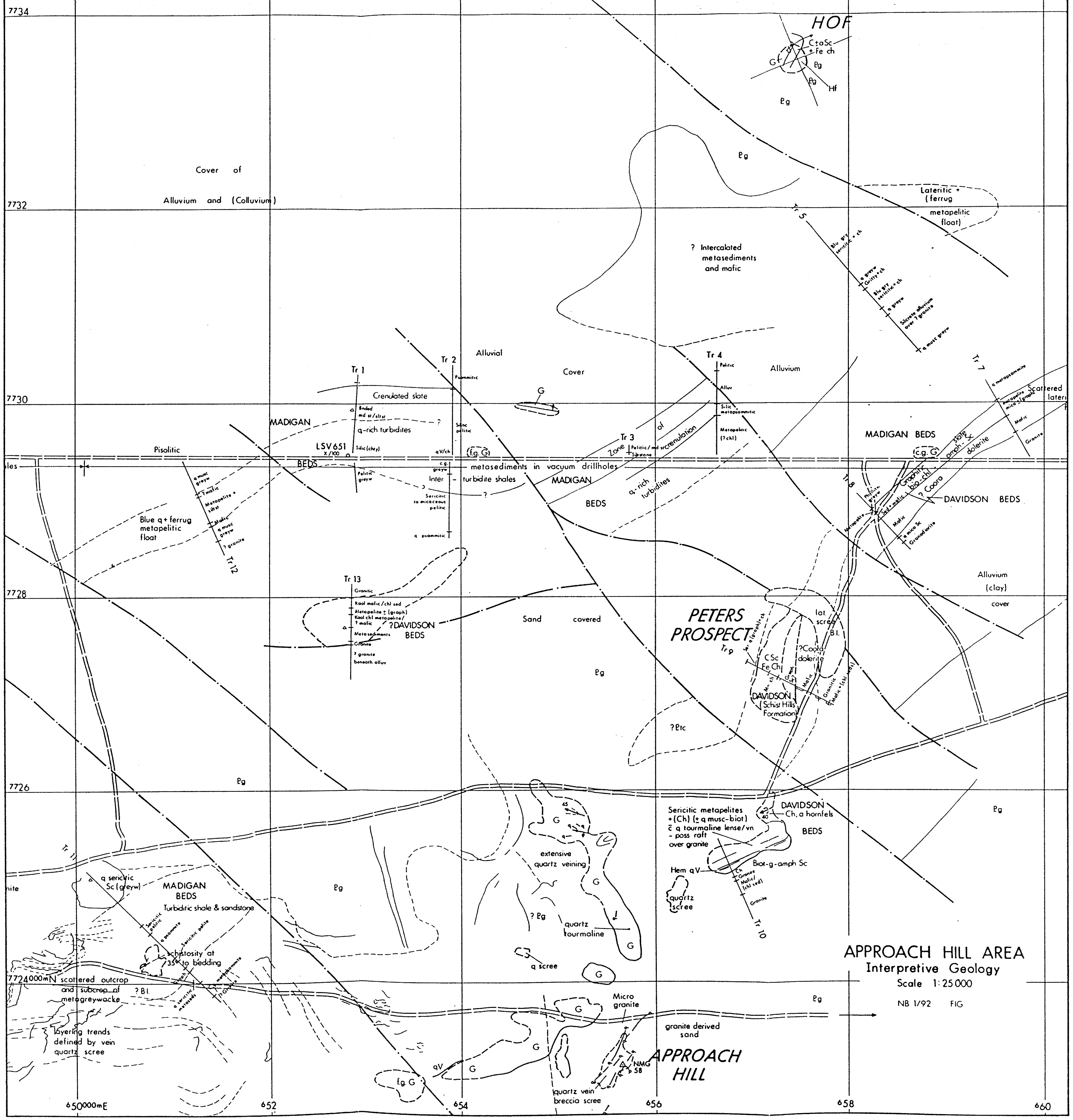
Results - Discussion

Rapid assessment of linear magnetic features suspected to reflect the presence of Davidson Beds was the original reason for the EM-RAB program at Approach Hill. Knowledge of the dispersion characteristics of gold and arsenic in the supergene environment at The Granites provided confidence that a mineralised zone would not be missed at the hole spacings used.

The program was considered successful for having detected gold anomalous mineralisation at Peter's Prospect and Hairdresser on Fire, though both of these could have been located by careful rock-chip sampling of outcrop areas, and were also indicated by the regional vacuum programme. Of significance to regional geological interpretations is the presence on some traverses of "Davidson facies" sediments (i.e. graphite schists) within a sequence of greywacke and pelite schist of "Madigan facies". This is interpreted to indicate a transitional boundary between Davidson and Madigan facies, a relationship comparable to that seen in several other areas in the Tanami Province (e.g. Mt. Ptilotus, Tanami). Though this does not preclude local unconformity, it supports the view that the entire Blake/Tanami/Davidson/Madigan sequence is intimately related, with all "boundaries" transitional, reflecting laterally equivalent facies differences rather than evolution through "layer cake" sedimentation.

8.4 Plans

Drawing No	Title	Scale
1099 975	RAB X Section Assay and Geology TRAV 4	1:500
1099 1239	RAB X Section Assay and Geology TRAV 5	1:500
1099 1240	RAB X Section Assay and Geology TRAV 7	1:500
1099 1241	RAB X Section Assay and Geology TRAV 13	1:500
1099 1242	RAB X Section Assay and Geology TRAV 17	1:500
1099 1243	RAB X Section Assay and Geology TRAV 19	1:500
1099 1244	RAB X Section Assay and Geology TRAV 20	1:500
60 130	J18 Geochemical Sampling	1:25000
1900 1334	RAB X Section Assay and Geology TRAV 12	1:500
1900 1335	RAB X Section Assay and Geology TRAV 11	1:500



HOF
Cover of
Alluvium and (Colluvium)
? Intercalated metasediments and mafic
Lateritic + (ferrug metapelitic float)
Alluvial
Cover
Alluvium
MADIGAN BEDS
Crenulated slate
q-rich turbidites
LSV651
Pisolitic
metasediments in vacuum drillholes
Inter - turbidite shales
Zone of crenulation
q-rich turbidites
DAVIDSON BEDS
Blue q + ferrug metapelitic float
?DAVIDSON BEDS
Sand covered
PETERS PROSPECT
DAVIDSON (Schist Hills Formation)
Alluvium (clay) cover
MADIGAN BEDS Turbiditic shale & sandstone
schistosity at 35° to bedding
extensive quartz veining
quartz tourmaline
q scree
Sericitic metapelites +(Ch) (± q musc-biot) c̄ q tourmaline lense/vn - poss raft over granite
DAVIDSON Ch, a hornfels BEDS
Biot-g-amph Sc
Hem qV
quartz scree
scattered outcrop and subcrop of metagreywacke
Layering trends defined by vein quartz scree
Micro granite
granite derived sand
APPROACH HILL
quartz vein breccia scree
APPROACH HILL AREA
Interpretive Geology
Scale 1:25 000
NB 1/92 FIG
7734
7732
7730
7728
7726
7724000mN
650000mE
652
654
656
658
660

APPROACH HILL

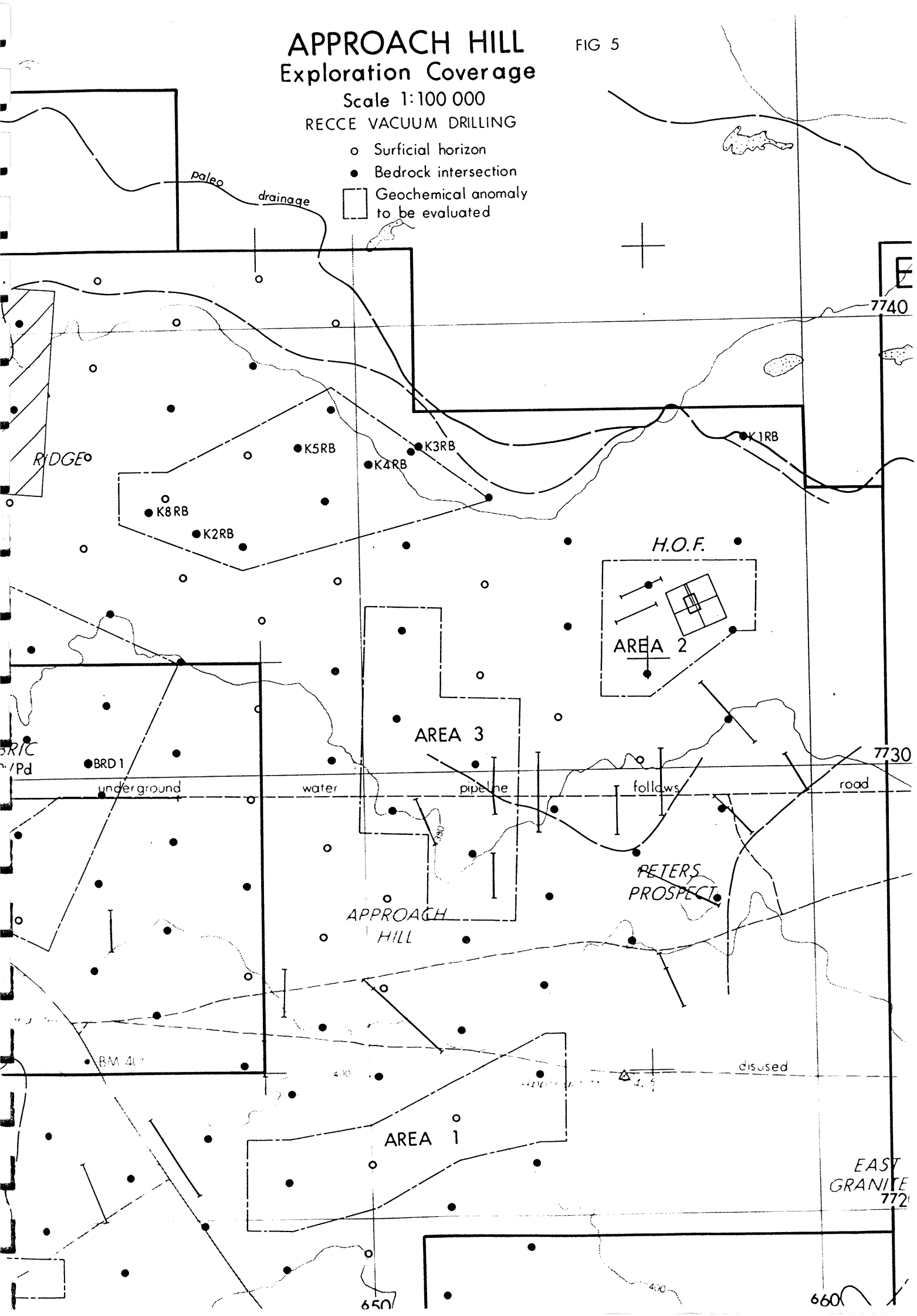
Exploration Coverage

Scale 1:100 000

FIG 5

RECCE VACUUM DRILLING

- o Surficial horizon
- ● Bedrock intersection
- Geochemical anomaly to be evaluated



Hairdresser on fire

Peter's Prospect

The Granites

Residual Magnetic Contour Map
APPROACH HILL AREA
showing traverses completed

1 : 100 000

Road / track

EM traverse

Conductor (located by EM)

RAB traverse

APPROACH HILL

Residual Majnetic Contours

Scale 1 : 25 000

N.P.B. 12/91

Peters' Prospect

7730N

7728N

7726N

7724N

650E

652E

654E

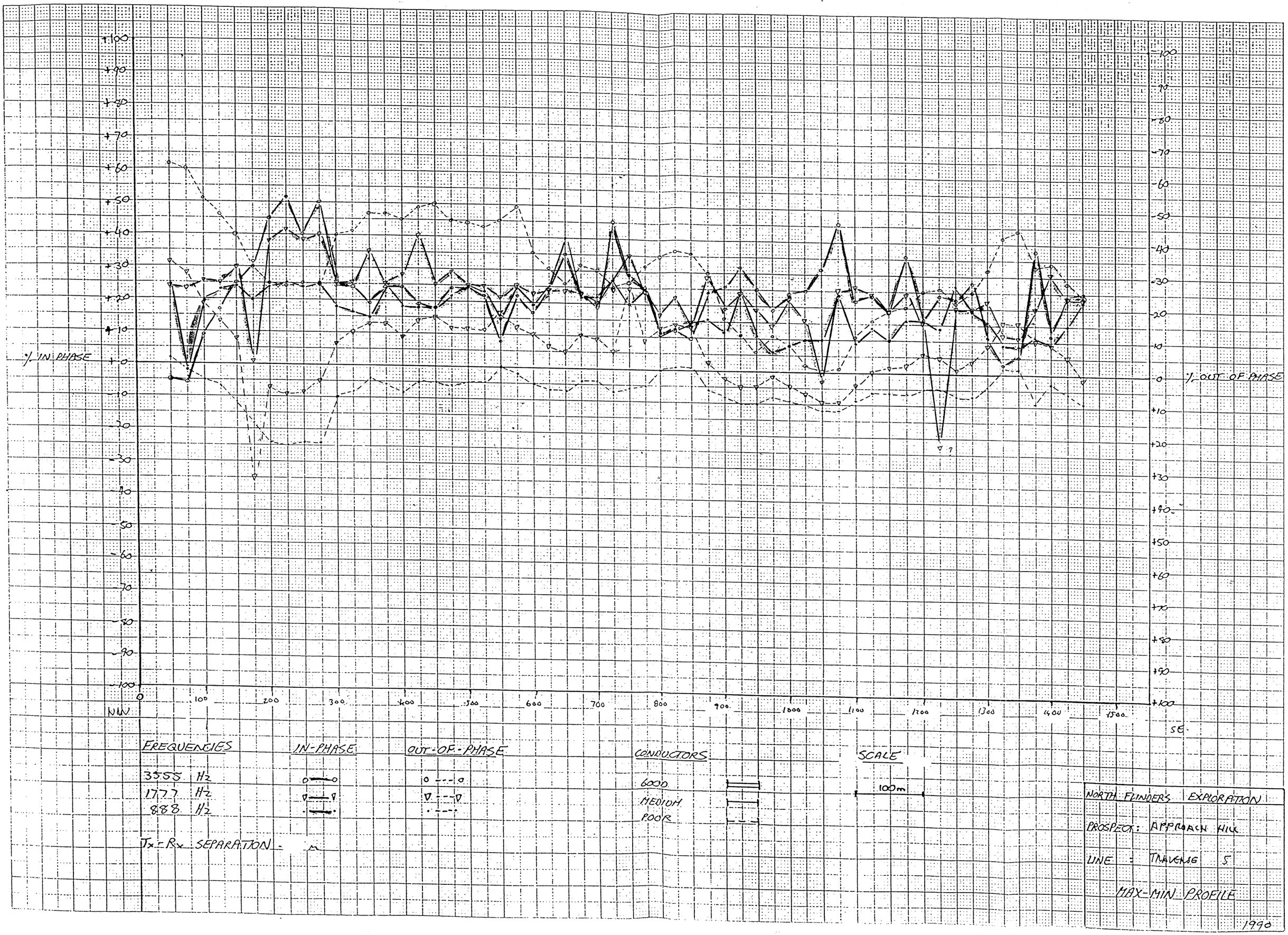
656E

APPROACH HILL

Residual Magnetic Contours

Scale 1 : 25000

N.B. 12/91



MICADOR A3 -- 297 x 420 mm

+100 +90 +80 +70 +60 +50 +40 +30 +20 +10 0 -10 -20 -30 -40 -50 -60 -70 -80 -90 -100

% IN PHASE

-100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 +10 +20 +30 +40 +50 +60 +70 +80 +90 +100

% OUT OF PHASE

0 100mN 200 300 400 500 600 700 800 700mN

FREQUENCIES

3555 Hz
1777 Hz
888 Hz

IN-PHASE

OUT-OF-PHASE

Tx - Rx SEPARATION 100 m

CONDUCTORS

6000
MEDIUM
POOR

SCALE

100m

NORTH FLINDERS EXPLORATION

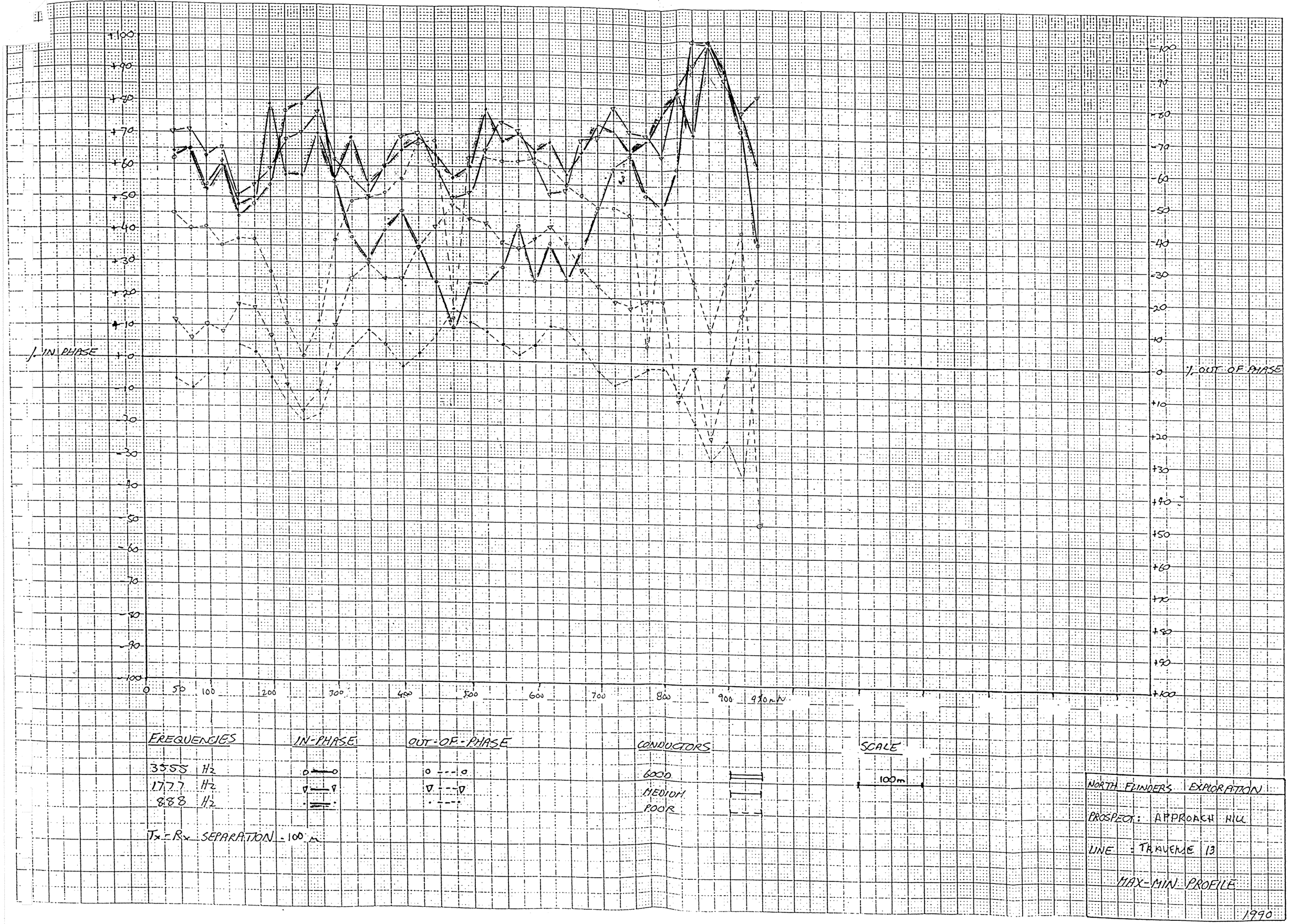
PROSPECT: APPROACH HILL

LINE : TRAVERSE 7

MAX-MIN PROFILE

1990

MICADOR A2 -- 297 x 420 mm



MICADOR A3 - 297 x 420 mm

+100 +90 +80 +70 +60 +50 +40 +30 +20 +10 +0 -10 -20 -30 -40 -50 -60 -70 -80 -90 -100

% IN PHASE

-100 -90 -80 -70 -60 -50 -40 -30 -20 -10 +0 +10 +20 +30 +40 +50 +60 +70 +80 +90 +100

% OUT OF PHASE

0 50N 100N 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

FREQUENCIES

3555 Hz
1777 Hz
888 Hz

IN-PHASE

OUT-OF-PHASE

Tx - Rx SEPARATION 100 m

CONDUCTORS

6000
MEDIUM
POOR

SCALE

100m

NORTH FLINDERS EXPLORATION

PROSPECT: APPROACH HILL

LINE : TRAVERSE 17

MAX-MIN PROFILE

1 OF 2

1990

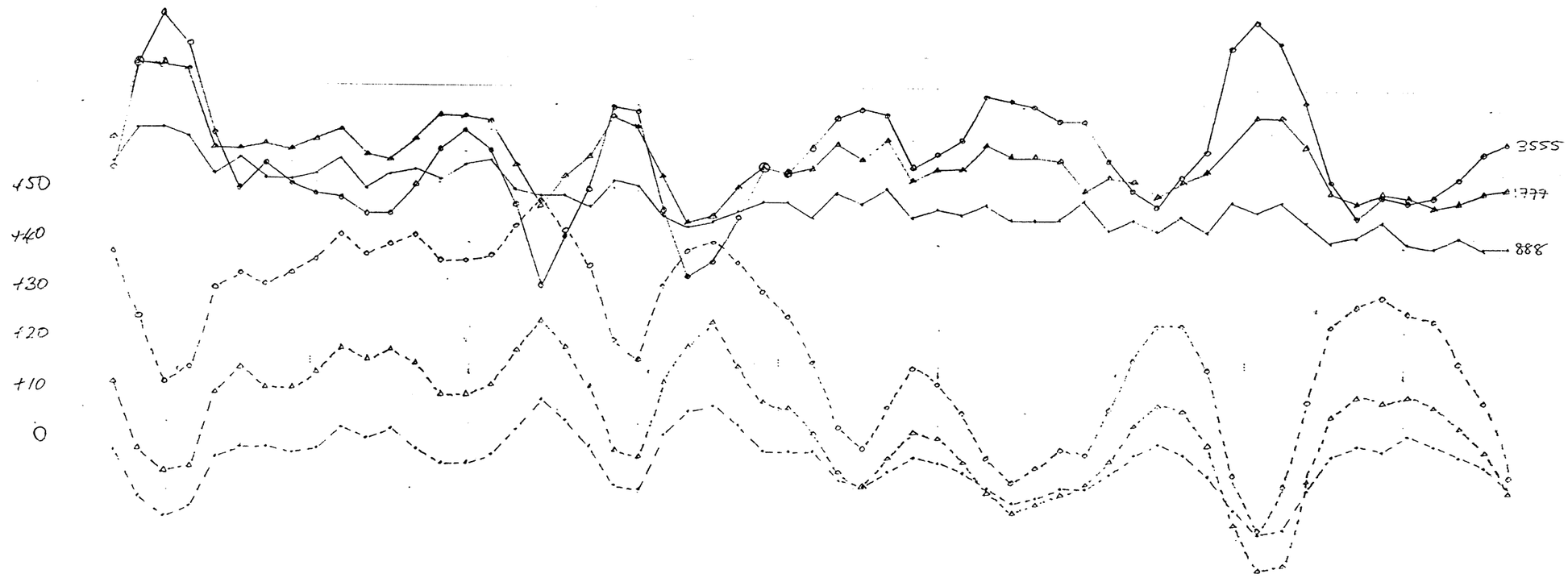
MICADOR A3 - 297 x 420 mm

Max Min

Approach Hill

Traverse 20

Data collected 18-9-1990



Tx – Rx = 100m

0mN 100N 200N 300N 400N 500N 600N 700N 800N 900N 1,000N 1,100N 1,200N 1,300N 1,400N 1,500N